



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/654,765

09/04/2003

Paul S. Nordman

7784-000630

6910

65961 7590 03/03/2009
HARNESS DICKEY & PIERCE, PLC
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

TOLIN, MICHAEL A

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

03/03/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/654,765	Applicant(s) NORDMAN, PAUL S.	
	Examiner MICHAEL A. TOLIN	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7,9-13,15,17,20-22,25 and 29-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7,9-13,15,17,20-22,25 and 29-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 4, 7, and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Day (US 5665450) in view of the collective teachings of Demeester (US 5885714), Bain (US 4793108), Shorr (US 3081205), and Padden (US 5500272), and further in view of Luvisi (US 3534004).

The claims are rejected here for the reasons provided in numbered paragraph 4 of the previous office action, mailed 12 May 2008.

As to the new language requiring a continuous peripheral edge, this limitation is suggested by the applied prior art. Demeester suggests a continuous peripheral edge for the reinforcement 5 (Figure 1). Shorr specifically indicates that the peripheral reinforcement may be provided as a continuous frame or as a plurality of strips (column 7, lines 31-49; Figure 1). It is further noted that a plurality of strips may be used to provide a continuous peripheral edge. The recitation of a continuous edge simply requires an edge which is unbroken. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the claimed continuous peripheral edge

Art Unit: 1791

because one of ordinary skill in the art would have been motivated to provide suitably shaped reinforcing members in accordance with the teachings of Demeester and Shorr.

3. Claims 13, 15, 17, 20-22, 25, and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Day in view of the collective teachings of Demeester, Bain, Shorr, and Padden, and further in view of Luvisi as applied to claims 1, 3, 4, 7, and 9-12 above, and further in view of Graff (US 3074832).

The claims are rejected here for the reasons provided in numbered paragraph 5 of the previous office action.

Response to Arguments

4. Applicant's arguments filed 12 August 2008 have been fully considered but they are not persuasive.

Applicant argues that Day does not teach the claimed one or more metallic peripheral layers to provide additional strength. The examiner responded to this argument on page 8 of the previous office action. The examiner's position is maintained.

Applicant argues that there is no suggestion in the secondary references to Demeester, Bain, Shorr and Padden that it would be helpful or possible to interleave one or more metal peripheral layers that have an opening between layers of a transparent window structure made up of transparent fibers and a transparent resin that has an index of refraction that matches the index of refraction of the transparent fibers.

Art Unit: 1791

The examiner respectfully disagrees. Each of Demeester, Bain and Shorr suggests the use of peripheral reinforcing members for aircraft windows in order to provide increased strength. These references also suggest providing such peripheral reinforcing members as an integral part of the window. As to providing composite materials with such reinforcement, Padden was applied to show the use of thin metal reinforcing sheets interleaved with fiber reinforced prepregs provides increased strength and particular advantages where fasteners are provided through the composite product. Padden also shows that such interleaving is a suitable manner of providing the metal reinforcing sheet. The examiner's position is that Applicant has achieved none but the expected results in observing increased strength upon inclusion of known peripheral reinforcing sheets for reinforcing aircraft window edges.

Applicant argues that Padden is not directed to forming windows. The examiner responded to this argument on page 9 of the previous office action. The examiner's position is maintained.

Applicant argues that Day makes no mention of the desirability of including peripheral reinforcement. Applicant further argues that composite windows of the type taught by Day are already strong and thus one of ordinary skill in the art would not have been led to provide additional reinforcement. This argument is not persuasive because Padden is also directed to composite materials having high strength, and teaches that interleaving metallic reinforcement with the fiber reinforced prepregs is desirable for providing additional strength. The examiner acknowledges that Day does not mention such peripheral reinforcement. However, the examiner's position is that one of ordinary

Art Unit: 1791

skill in the art would still appreciate that Day's window would benefit from such reinforcement in accordance with the teachings of the applied secondary references to Demeester, Bain, Shorr and Padden.

Applicant's arguments with respect to the newly added claim language in claim 1 has been addressed in the new rejection applied above.

Applicant argues that Padden involves the use of a full layer of metallic interlayer as opposed to a peripheral member. This argument is not persuasive because each of Demeester, Bain and Shorr suggests the use of a peripheral integral member for reinforcing aircraft windows. Furthermore, one of ordinary skill in the art would have readily appreciated that the use of a full layer of metallic interlayer would render the window non-transparent.

Applicant argues that Luvisi does not teach a peripheral reinforcing metallic interlayer wherein the window has a construction of fibers and resin with matching indices of refraction. In response, the Luvisi was not relied upon for this limitation. Luvisi was relied upon for a teaching that the claimed aliphatic epoxy resin is known to have particular benefits in aircraft canopies and windows. It is further noted that Day, the primary reference, indicates that practically all transparent polymers are suitable for manufacturing the composite window (column 7, line 1).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 1791

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). The new grounds of rejection applied above were necessitated by the new language added to claim 1.

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL A. TOLIN whose telephone number is (571)272-8633. The examiner can normally be reached on M-F 9am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 1791

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael A Tolin/
Examiner, Art Unit 1791

/Richard Crispino/
Supervisory Patent Examiner, Art Unit 1791